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| 09/805,156      | 03/14/2001  | Takayuki Hasebe      | 26.1701             | 1766             |

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EXAMINER

SIMITOSKI, MICHAEL J

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2134

DATE MAILED: 03/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/805,156

Applicant(s)

HASEBE ET AL.

Examiner

Michael J Simitoski

Art Unit

2134

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. The election of 10/1/2004 was received and considered.
2. Claims 1-28 are pending.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 9 & 17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claims comprise a correction information resetting unit, but the specification does not disclose such a device.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1, 3-15, 17, 19, 21-24 & 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
7. Claim 1 recites the limitation "the specified date-and-time manager" in lines 12 & 14 of page 53. There is insufficient antecedent basis for this limitation in the claim.

8. Regarding claims 3 & 11, the limitation “device for a manager on the date-and-time manager side” is unclear.
9. Regarding claims 3-7, 11-15 & 19-20, the limitation “copy request for a date-and-time” is unclear; specifically, “date-and-time” is used in the claims as an independent modifier, rather than the nouns “date and time”.
10. Regarding claims 3 & 11, the claims recite “a date-and-time management device for a manager on the date-and-time manager side”, but the claims are directed to an apparatus capable of inputting a request from a plurality of managers.
11. Regarding claim 5, the claim recites the limitation “the information about the managed date-and-time” in lines 3-4. There is insufficient antecedent basis for this limitation in the claim.
12. Regarding claims 4-6 & 12-14, the term “nonreproductive” is unclear.
13. Regarding claims 4 & 12, the claim recites that the information is received from the date-and-time management device to the date-and-time copy data generation unit, but the management device comprises the copy data generation unit.
14. Regarding claims 4 & 12, the limitation “generating data for copy” is unclear.
15. Regarding claims 4 & 12, the limitation “the date-and-time management device which accepted the date-and-time setting request and the date-and-time managed by the date-and-time management device for the manager” is unclear. Specifically, as best understood, the date and time is the request and “which accepted” implies multiple apparatuses.
16. Regarding claims 4 & 12, it is unclear whether “data for copy” is generated using nonreproductive information or “data” is generated for the step of copy[ing] that uses nonreproductive information”.

17. Regarding claims 7 & 15, claims 3 & 11 are directed to an apparatus, however claims 7 & 15 appear to be directed to a method of delivering a device by presenting non-apparatus limitations and therefore the scope of the claim is unclear.

18. Regarding claims 9 & 17, the claims recite that the information in the nonvolatile storage unit is reset when the clock unit becomes short of power. However, this appears to redefine the memory as a volatile storage unit, as volatility is only claimed as a performance characteristic rather than a physical distinction.

19. Claim 19 recites the limitation "the specified date-and-time manager" in lines 3 & 5 of page 60. There is insufficient antecedent basis for this limitation in the claim.

20. Regarding claims 22 & 26, the claims are rejected as being indefinite in that they fail to point out what is included or excluded by the claim language. These claims are omnibus type claims. One or more functions other than the function of generating a signature and other function executing unit executing other functions are indefinite limitation.

21. Regarding claims 22 & 26, it is unclear how apparatus claims comprise "functions".

### ***Claim Rejections - 35 USC § 102***

22. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

23. Claims 1 & 2, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,444,780 to Hartman, Jr. (Hartman). Hartman discloses a date-and-time setting request reception unit/client (col. 6, lines 35-37) accepting a date-and-time setting request from any date-and-time manager/application before accepting a date-and-time setting request from a predetermined date-and-time manager/application (requests are accepted from applications requiring secure TOD and non-secure TOD because the authenticated time indicator is TRUE) (col. 6, line 65 – col. 7, line 12) and accepting a date-and-time setting request only from the specified date-and-time manager/application requiring non-secure TOD after accepting a date-and-time setting request from the specified date-and-time manager (once the authenticated time indicator = FALSE again, the applications that require a secure TOD are denied access) (col. 6, lines 59-60 & col. 9, line 50 – col. 10, line 2) and a clock unit functioning in response to the accepted date-and-time request (Fig. 1, #108).

24. Claims 1-3 & 11, as best understood, are rejected under 35 U.S.C. 102(a) as being anticipated by “System Time Management” by Cisco Systems, Inc (Cisco), April 2000.

Regarding claims 1 & 2, Cisco discloses a date-and-time management apparatus/switch comprising a date-and-time setting request reception unit/switch accepting a date-and-time setting request/time from any date-and-time manager/NTP server (p. 3, § Configuring NTP Authentication) before accepting a request from a predetermined date-and-time manager/authenticated NTP server, and accepting a date-and-time setting request only from the

specified date-and-time manager/authenticated NTP server after accepting a date-and-time setting request from the specified date-and-time manager/authenticated NTP server (p. 3, § Configuring NTP Authentication) and a clock unit/clock functioning in response to the accepted date-and-time setting request (p. 3, § Configuring NTP Authentication).

Regarding claims 3 & 11, Cisco discloses a date-and-time management device/switch (p. 3) for a manager on the date-and-time manager side (p. 1, ¶1-4), wherein said date-and-time management device for the manager comprises a date-and-time setting request unit/switch for issuing to said date-and-time setting request reception unit/switch a copy request/synchronization request (p. 3) for a date-and-time managed by said device/switch as the date-and-time setting request.

25. Claims 1 & 2, as best understood, are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,009,518 to Shiakallis. Shiakallis discloses a date-and-time setting request reception unit/pc accepting a request form any date-and-time manager/user before accepting a date-and-time setting request from a predetermined date-and-time manager/administrator and accepting a date-and-time setting request only from the specified date-and-time manager after accepting a date-and-time setting request from the specified date-and-time manager and a clock unit/clock in pc functioning in response to the accepting date-and-time setting request (col. 4, lines 12-20).

***Claim Rejections - 35 USC § 103***

26. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

27. Claims 7 & 15, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Cisco, as applied to claims 3 & 11 above. Cisco is silent regarding the delivery of the date-and-time management device for the manager. However, the examiner takes Official Notice that initializing a product upon delivery is old and well established in the art of communication equipment distribution as a method of activating a product. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a deliverer with a date and time setting device for setting the date and time of the date-and-time management device for the manager upon delivery. One of ordinary skill in the art would have been motivated to perform such a modification to activate the device and enable further use. This advantage is well known to those skilled in the art.

28. Claims 4-6, 12-14, 19-22 & 25-26, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Cisco, as applied to claims 3 & 11 above, in further view of Handbook of Applied Cryptography by Menezes et al. (Menezes).

Regarding claims 4-6 & 12-14, Cisco discloses a copy data generation unit/switch for generating data for copying of the date and time (updating the time) (p. 3), but lacks using nonreproductive information received from the management device which accepted the request and the date-and-time managed by said management device for the manager. However, Menezes



teaches that to prevent replay attacks in protocols, nonces are used, which is a non-repeating value included in the protocol messages (pp. 397-398, §10.3.1). Menezes further teaches that when transporting keys from an authority to a user, digital signatures are used to authenticate the data (p. 507, ¶2 & p. 570, Remark 13.37) and can include non-repeating values such as sequence numbers to prevent replay attacks (p. 570, Remark 13.37). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to generate data for copy of the date-and-time by encrypting the information about the managed date-and-time (date and time) and the nonreproductive information (random/nonce) to generate the data for copy of the date and time (updated, verified time). One of ordinary skill in the art would have been motivated to perform such a modification to verify that a time has not been modified (data verification) and that the time update has not been replayed, as taught by Menezes (pp. 397-398, §10.3.1, p. 507, ¶2 & p. 570, Remark 13.37).

Regarding claims 19 & 20, Cisco discloses a date-and-time management apparatus/switch comprising a date-and-time setting request reception unit/switch accepting a date-and-time setting request/time from any date-and-time manager/NTP server (p. 3, § Configuring NTP Authentication) before accepting a request from a predetermined date-and-time manager/authenticated NTP server, and accepting a date-and-time setting request only from the specified date-and-time manager/authenticated NTP server after accepting a date-and-time setting request from the specified date-and-time manager/authenticated NTP server (p. 3, § Configuring NTP Authentication) and a clock unit/clock functioning in response to the accepted date-and-time setting request (p. 3, § Configuring NTP Authentication). Cisco lacks a signature generation unit generating a signature for input data to be signed according to information about

a date-and-time indicated by said clock unit. However, Menezes teaches that a trusted timestamping service provides a user with a dated receipt by appending a timestamp to a document and signing the composite document (p. 581, §13.8.1). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the network time protocol described by Cisco in a trusted timestamping service. One of ordinary skill in the art would have been motivated to perform such a modification to provide a user with a dated receipt, as taught by Menezes (p. 581, §13.8.1).

Regarding claims 21 & 25, Cisco, as modified above, lacks explicitly a signature stop unit. However, the examiner takes Official Notice that stopping a calculation when a required input is unavailable is old and well established in the art of data processing as a method of avoiding invalid results. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a signature stop unit to stop the signature generation unit when an operation stop of said clock unit is detected. One of ordinary skill in the art would have been motivated to perform such a modification to avoid invalid timestamping results as a time will not be inputted. This advantage is well known to those skilled in the art.

Regarding claims 22 & 26, Cisco, as modified above, discloses one or more functions/switching packets.

29. Claims 8 & 16, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Cisco, as applied to claims 1 & 2 above, in further view of U.S. Patent 6,157,957 to Berthaud. Cisco, as described above, lacks a nonvolatile storage memory. However, Berthaud teaches that to guarantee a pre-specified precision, correction

information/conversion function information is calculated (col. 9, lines 19-29) and stored in non-volatile memory (col. 7, lines 1-5). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a nonvolatile storage unit storing correction information. One of ordinary skill in the art would have been motivated to perform such a modification to guarantee precision, as taught by Berthaud (col. 7, lines 1-5 & col. 9, lines 19-29).

30. Claims 10 & 18, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Cisco & Berthaud, as applied to claims 8 & 16 above. Cisco is silent about a secondary battery. However, the examiner takes Official Notice that including a secondary battery as a power source to a clock is old and well established in the art of electronic, clocked devices as a method of retaining power to the clock if the power to the device is removed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a secondary battery as a power source of said clock unit. One of ordinary skill in the art would have been motivated to perform such a modification to retain clock functionality when power is removed. This advantage is well known to those skilled in the art.

31. Claims 23 & 27, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Cisco & Menezes, as applied to claims 19 & 20 above, in further view of U.S. Patent 5,444,780 to Hartman, Jr. (Hartman). Cisco, as modified above, lacks storing information about a date-and-time setter who has issued a date-and-time setting request and generating a

Art Unit: 2134

signature according to the information about the date-and-time setter in addition to the date-and-time information. However, Hartman teaches that in some schemes for sending an updated time from a device to a client, the device encrypts an authenticated code using a secret key, a time value and an authenticated device ID (col. 2, lines 30-45). This is done to establish trust between the device and the client (col. 1, line 66 – col. 2, line 3). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to store date-and-time setter information and generate a signature according to information about the date-and-time setter. One of ordinary skill in the art would have been motivated to perform such a modification to establish trust between the date-and-time setter and the management device, as taught by Hartman (col. 1, line 66 – col. 2, line 3 & col. 2, lines 30-45).

32. Claims 24 & 28, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Cisco & Menezes, as applied to claims 19 & 20 above, in further view of U.S. Patent 6,199,169 to Voth. Cisco discloses authenticating the NTP messages (p. 3), but lacks storing a number of setting requests and generating the signature according to information about the frequency information in addition to the date-and-time information. However, Voth teaches that to update distributed time devices with variable transmission delay (col. 2, lines 27-44), it is useful to send the adjustment time/date-and-time info and time changes/frequency information (col. 5, lines 6-17). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to store a number of setting requests/time changes and to include this information in the signature. One of ordinary skill in the art would have been motivated to perform such a modification to update distributed time devices with variable

Art Unit: 2134

transmission delay with authenticated time correction information, as taught by Voth (col. 2, lines 27-44 & col. 5, lines 6-17).

***Conclusion***

33. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Simitoski whose telephone number is (571) 272-3841. The examiner can normally be reached on Monday - Thursday, 6:45 a.m. - 4:15 p.m.. The examiner can also be reached on alternate Fridays from 6:45 a.m. - 3:15 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse can be reached at (571) 272-3838.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, DC 20231

**Or faxed to:**

(703)746-7239 (for formal communications intended for entry)

**Or:**

(571)273-3841 (Examiner's fax, for informal or draft communications, please label "PROPOSED" or "DRAFT")

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
MJS

March 14, 2005



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